

Application No. 10/810,405  
Reply to Office Action of December 15, 2006

**AMENDMENTS TO THE CLAIMS**

Claims 40-70 are pending in the instant application. Claims 1-39 have been cancelled and new claims 41-70 have been introduced. The Applicant requests reconsideration of the claims in view of the following remarks.

Listing of claims:

1 - 39. (Cancelled)

40. (Previously Presented) A system for processing received signals in a communication system, the system comprising:

a mixer;  
a low pass filter directly electrically coupled to said mixer; and  
a plurality of gain controllers serially coupled to an output of said low pass filter; and  
a plurality of analog to digital converters, wherein:  
an input of a first of said plurality of analog-to-digital converters is directly electrically coupled to said output of said low pass filter; and  
an input of each of a remaining portion of said plurality of analog-to-digital converters is individually directly electrically coupled to a corresponding output of each of said serially coupled plurality of gain controllers.

41. (New) A method for processing received signals in a communication system, the method comprising:

receiving an RF signal;  
generating a plurality of narrowband signals from said received RF signals;  
converting said at least a portion of said generated plurality of upstream narrowband signals to corresponding digital signals;  
calculating an intermediate gain, which enables carrier sense detection, for each of said at least a portion of said generated plurality of upstream narrowband signals based on a power of each of said corresponding digital signals and based on whether said of each of said corresponding digital signals is clipped; and  
adjusting a final gain of said received RF signal based on said calculated intermediate gain of each of said at least a portion of said generated plurality of upstream narrowband signals.

42. (New) The method according to claim 41, comprising sampling said each of said at least a portion of said generated plurality of upstream narrowband signals during a training period.

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43. (New) The method according to claim 42, comprising determining a power of said each of said at least a portion of said generated plurality of upstream narrowband signals based on said sampling.

44. (New) The method according to claim 43, comprising summing samples resulting from said sampling to determine said power of said each of said at least a portion of said generated plurality of upstream narrowband signals.

45. (New) The method according to claim 44, comprising comparing said determined power of said each of said at least a portion of said generated plurality of upstream narrowband signals to defined threshold values.

46. (New) The method according to claim 45, comprising selecting said final gain based on said comparing.

47. (New) The method according to claim 45, comprising selecting a comparable power value corresponding to one of said defined threshold values as said final gain.

48. (New) The method according to claim 45, wherein said defined threshold values are stored in a lookup table.

49. (New) The method according to claim 41, comprising determining whether said corresponding digital signals is clipped during a preamble portion of packets in said received RF signals.

50. (New) The method according to claim 41, comprising applying said calculated intermediate gain that enables said carrier sense detection to each of said at least a portion of said generated plurality of upstream narrowband signals.

51. (New) A machine-readable storage having stored thereon, a computer program having at least one code section for processing received signals in a communication system, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

receiving an RF signal;

generating a plurality of narrowband signals from said received RF signals;

converting said at least a portion of said generated plurality of upstream narrowband signals to corresponding digital signals;

calculating an intermediate gain, which enables carrier sense detection, for each of said at least a portion of said generated plurality of upstream narrowband signals based on a power of each of said corresponding digital signals and based on whether said of each of said corresponding digital signals is clipped; and

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adjusting a final gain of said received RF signal based on said calculated intermediate gain of each of said at least a portion of said generated plurality of upstream narrowband signals.

52. (New) The machine-readable storage according to claim 51, comprising code for sampling said each of said at least a portion of said generated plurality of upstream narrowband signals during a training period.

53. (New) The machine-readable storage according to claim 52, comprising code for determining a power of said each of said at least a portion of said generated plurality of upstream narrowband signals based on said sampling.

54. (New) The machine-readable storage according to claim 53, comprising code for summing samples resulting from said sampling to determine said power of said each of said at least a portion of said generated plurality of upstream narrowband signals.

55. (New) The machine-readable storage according to claim 54, comprising code for comparing said determined power of said each of said at least a portion of said generated plurality of upstream narrowband signals to defined threshold values.

56. (New) The machine-readable storage according to claim 55, comprising selecting said final gain based on said comparing.

57. (New) The machine-readable storage according to claim 55, comprising code for selecting a comparable power value corresponding to one of said defined threshold values as said final gain.

58. (New) The machine-readable storage according to claim 55, wherein said defined threshold values are stored in a lookup table.

59. (New) The machine-readable storage according to claim 51, comprising code for determining whether said corresponding digital signals is clipped during a preamble portion of packets in said received RF signals.

60. (New) The machine-readable storage according to claim 51, comprising code for applying said calculated intermediate gain that enables said carrier sense detection to each of said at least a portion of said generated plurality of upstream narrowband signals.

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61. (New) A system for processing received signals in a communication system, the system comprising:

at least one processor that enables receiving of an RF signal;

said at least one processor enables generation of a plurality of narrowband signals from said received RF signals;

said at least one processor enables converting of said at least a portion of said generated plurality of upstream narrowband signals to corresponding digital signals;

said at least one processor enables calculation of an intermediate gain, which enables carrier sense detection, for each of said at least a portion of said generated plurality of upstream narrowband signals based on a power of each of said corresponding digital signals and based on whether said of each of said corresponding digital signals is clipped; and

said at least one processor enables adjusting of a final gain of said received RF signal based on said calculated intermediate gain of each of said at least a portion of said generated plurality of upstream narrowband signals.

62. (New) The system according to claim 61, wherein said at least one processor enables sampling of said each of said at least a portion of said generated plurality of upstream narrowband signals during a training period.

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63. (New) The system according to claim 62, wherein said at least one processor enables determining of a power of said each of said at least a portion of said generated plurality of upstream narrowband signals based on said sampling.

64. (New) The system according to claim 63, wherein said at least one processor enables summing of samples resulting from said sampling to determine said power of said each of said at least a portion of said generated plurality of upstream narrowband signals.

65. (New) The system according to claim 64, wherein said at least one processor enables comparing of said determined power of said each of said at least a portion of said generated plurality of upstream narrowband signals to defined threshold values.

66. (New) The system according to claim 65, wherein said at least one processor enables selecting of said final gain based on said comparing.

67. (New) The system according to claim 65, wherein said at least one processor enables selecting of a comparable power value corresponding to one of said defined threshold values as said final gain.

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68. (New) The system according to claim 65, wherein said defined threshold values are stored in a lookup table.

69. (New) The system according to claim 61, wherein said at least one processor enables determining of whether said corresponding digital signals is clipped during a preamble portion of packets in said received RF signals.

70. (New) The system according to claim 61, wherein said at least one processor enables applying of said calculated intermediate gain that enables said carrier sense detection to each of said at least a portion of said generated plurality of upstream narrowband signals.